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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/650,103	08/29/2000	FRANCIS A. ABRAMOVICH	BUR9-1999-0267-US1	9020

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EXAMINER

EL ARINI, ZEINAB

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 09/25/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/650,103

Applicant(s)

ABRAMOVICH ET AL.

Examiner

Zeinab E. EL-Arini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 29 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

1. In view of applicants' argument, the restriction requirement has been reconsidered. Group I includes claims 1-28 (a method of preparing an article), and Group II includes claims 29-30 (an apparatus for preparing a workpiece).

Claims 1-28 are pending, and claims 29-30 have been withdrawn from further consideration by the examiner. This is because the process as claimed can be practiced by another apparatus such as one without one or more partitions extending between interior walls of the vessel within a top portion of the vessel without extending to a bottom surface of the vessel as claimed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-11, 16, 18, 25-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 3, " each layer" lacks antecedent basis.

In claim 11, lines 1-3 (wherein the step of providing an article-----at least two fluids) is confusing and indefinite term.

In claim 16, line 1, " the processing step" lacks antecedent basis.

In claim 18, line 4, claim 24, line 3, "substantially" is indefinite term.

In claims 25, 26, " the etchant solution" lacks antecedent basis.

In claim 25, line 9, " the fluid interface" lacks antecedent basis.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (5,603,849) in combination with Matthews (5,911,837) or Berbel (5,989,359) and Squires et al. (4,619,706).

Li teaches a method and compositions for cleaning silicon wafers in a two-phase liquid system. See the abstract. The reference teaches the etchant, the at least two fluids of differing densities, as claimed. Li also teaches using nonpolar

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organic liquids, which is selected from the group consisting of ketones, ethers, alkanes and alkenes. See col. 3, lines 10-67, and cols. 4-6, and the claims.

Li does not teach passing the article through at least one fluid interface horizontally, or at any other interface, the vessel, removing water, and the agitation as claimed.

Matthews teaches a process for treatment of semiconductor wafers in a fluid. The reference teaches the vessel, the drying, and two fluids as claimed. See the document in general.

Berbel teaches a method for drying objects with fluids. See the document in general.

Squires et al. teach a method of stripping organic coating from substrates. The reference teaches the two-phase fluids, and the agitation as claimed.

It would have been obvious for one skilled in the art to use the vessel taught by Matthews and the agitation taught by Squires et al. in the Li process to obtain the claimed process. This is because all references are from the same technical endeavor, which is a method of preparing a substrate by using two-phase fluids. One skilled in the art would use the drying taught by Berbel or Matthews in the Li process to obtain the claimed process. This is because it is well known in the art to use two-phase fluids for removing water or liquid from a surface of a substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is (703) 308-3320. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Zeinab E. EL-Arini
Zeinab E. EL-Arini
Primary Examiner
Art Unit 1746

ZEE
September 20, 2002